

In the Claims:

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7. (New) A method for providing a diagnosis as to whether hypotension in a patient is due to vasodilation or is associated with compensatory vasoconstriction, said method comprising the steps of:

- (i) measuring the arterial waveforms from a periphery artery,
- (ii) performing an harmonic analysis on said measured waveforms and comparing the moduli of the harmonic components,
- (iii) diagnosing the cause of hypotension as being vasodilation if the modulus of the second harmonic is less than the modulus of the first harmonic, and
- (iv) diagnosing hypotension as being associated with vasoconstriction if the modulus of the first harmonic is less than the modulus of the second harmonic.

8. (New) A method according to claim 7, part (iii), comprising the further steps of assessing the patient's heart rate and determining the presence of absence of significant arrhythmia, and wherein, in the absence of significant arrhythmia and where the heart rate is less than 120 beats per minute, diagnosing the cause of hypotension as being vasodilation.

9. (New) A method according to claim 7, part (iv) and wherein said

harmonic analysis includes the step of determining the ratio of the first harmonic to the sum of the subsequent harmonics, the further step of diagnosing hypotension as being associated with vasoconstriction, if the ratio is much less than 0.5, and diagnosing the cause of hypotension as being vasodilation if the ratio is much greater than 1.0.

10. (New) A method for providing a diagnosis as to whether hypotension in a patient is due to vasodilation or is associated with compensatory vasoconstriction, said method comprising the steps of:

- (i) measuring the arterial waveforms from a periphery artery,
- (ii) comparing the amplitude of the primary waveform (peak to wave foot) to the amplitude of the secondary waveform (secondary peak to wave foot),
- (iii) diagnosing hypotension as being associated with vasoconstriction if the amplitude of the secondary waveform is greater than 30% of the amplitude of the primary waveform, and
- (iv) diagnosing the cause of hypotension as being vasodilation if the amplitude of the secondary waveform is less than 25% of the amplitude of the primary waveform.

11. (New) A method according to claim 7 wherein a hypotensive individual in sinus rhythm or without significant arrhythmia is confirmed to have

the lowest fundamental harmonic, at heart rate less than 120/min, dominant over all the other harmonics and can be concluded as likely to have vasodilation as the cause of hypertension.

12. (New) A method according to claim 7 wherein, in the hypotensive individual, amplitude of the primary waveform (peak to wave foot) is compared to amplitude of the secondary waveform (secondary peak to wave foot) and the secondary wave confirmed to have amplitude less than 25% of the primary waveform as denoting hypotension due to vasodilation whereas amplitude of the secondary waveform greater than 30% of the primary wave denotes hypotension due to vasoconstriction and acute blood loss, cardiac failure, tamponade or pulmonary embolism.